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1020 Nineteenth Street, NW  
Washington, DC 20036  
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Elridge A. Stafford  
Executive Director-  
Federal Regulatory

00-412  
**USWEST**

April 20, 2000

Mr. Dale Hatfield  
Chief, Office of Engineering and Technology  
Federal Communications Commission  
445 12<sup>th</sup> Street, SW, Room 7-C155  
Washington, DC 20554

RECEIVED  
APR 20 2000  
FEDERAL COMMUNICATIONS COMMISSION  
OFFICE OF THE SECRETARY

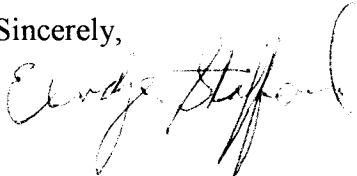
RE: CFR 46, Section 63.100  
Final Service Disruption Report, Eagan, MN  
EAGNMNLB

Dear Mr. Hatfield:

On March 21, 2000, U S WEST Communications (USWC) experienced a Service outage in Eagan, Minnesota. In accordance with the reporting rules, enclosed is USWC's Final Service Disruption Report for this outage.

Please contact me if you have questions concerning this report.

Sincerely,



Attachments

cc: Mr. Robert Kimball  
Mr. Stagg Newman

# Final Service Disruption Report

**Reporting Company:** U S WEST

**Location of Disruption:** Eagan, MN (EAGNMNLB)

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**1. Date and Time of Incident:**

March 21, 2000 at 1401 CST.

**2. Geographic Area Affected:**

Customers in Eagan, MN and, specifically, Northwest Airlines were affected.

**3. Estimated Number of Customers Affected:**

Approximately 4500 U S WEST customers were affected by the outage.

**4A. Types of Services Affected:**

Local loop services were affected. This event did not affect Network Access Lines or FAA circuits; however, extensive media coverage occurred due to the impact to Northwest Airlines.

**4B. 911 Service Affected:**

911 Service was not affected.

**5. Duration of Outage:**

Service was restored incrementally. The OC48 serving Northwest was restored within 2 and one half hours, at 1712 CST. Circuits affecting flights were restored at 2235 CST; Unisys was restored at 0152 CST, on March 22<sup>nd</sup>. Continuing on March 22<sup>nd</sup>, all fiber cable was fully restored at 0254 CST; the 1500 and 1800 pr. copper cables were restored by 0600 CST; and the 1200 pr. cable was restored by 1000 CST. Total duration of the outage was 19 hours, 59 minutes.

**- 6. Estimated Number of Blocked Calls:**

Because only the local loop was impacted, we are unable to estimate the number of blocked calls.

**7A. Root Cause of the Incident:**

The root cause of the incident was a cable cut due to contractor error.

**7B. Name and Type of Equipment:**

Two 144 strand Fiber Optic Cables  
One 1200 Pair Copper Cable  
One 1500 Pair Copper Cable  
One 1800 Pair Copper Cable

**7C. Specific Part of Network Affected:**

Local loop exchange service and customer specific circuits.

**8. Method(s) Used to Restore Service:**

The cables were spliced to restore service.

## 9. Steps Taken to Prevent Recurrence of Outage:

The following steps have been or will be taken to prevent recurrence of the outage:

A cable locate request had been made by Northern Construction, Inc. Northern was placing fiber facilities on behalf of M&P Utilities, a contractor for McLeod USA. The facilities were properly located, pursuant to Minnesota "Gopher State One Call" law, Chapter 216D. Northern failed to determine the precise location of the U S WEST facilities before using horizontal directional boring equipment within 24 inches of the marked location. The facilities were first damaged during the push of the directional bore and more extensively damaged when the reamer head was attached to the bore and pulled back through the excavation.

- ◆ U S WEST has met with the Minnesota Office of Pipeline Safety, M&P Utilities and Northern Construction to discuss safe digging and boring practices, as well as obligations of excavators pursuant to Minnesota law.
- ◆ The contractors (M&P Utilities and Northern Construction) and the project owner (McLeod USA) will be billed for all U S WEST and customer damages.

### 10A. Applicable Best Practice(s):

U S WEST reviewed Network Reliability: A Report to the Nation, June 1993 and evaluated all recommendations and best practices by focus area. Based on the root cause analysis, the most appropriate focus areas are:

#### Section A – Fiber Optics Cable Dig-Ups

Reference 6.1.1 – Best Practices to Prevent Fiber Cable Damage Caused By Digging

#### Section B - Signaling Network Systems

Reference 6.1.1 - Root Cause Analysis

### 10B. Best Practice(s) Used:

#### Section A – Fiber Optics Cable Dig-Ups

Reference 6.1.1 – Best Practices to Prevent Fiber Cable Damage Caused By Digging

#### Section B - Signaling Network Systems

Reference 6.1.1 - Root Cause Analysis

**10C. Analysis of Effectiveness of Best Practice(s):**

Section A – Fiber Optics Cable Dig-Ups

Reference 6.1.1 – Best Practices to Prevent Fiber Cable Damage Caused By Digging

This recommendation describes cable locate requirements and damage prevention measures. It specifies enactment and enforcement of federal and state “call-before-you-dig” legislation and underground facility damage prevention laws. U S WEST fully supports this best practice and responds promptly to accurately establish and mark cable route locations. The cable involved in this event was accurately located.

Section B - Signaling Network Systems

Reference 6.1.1 - Root Cause Analysis

While this recommendation is specific to Signaling Networks, U S WEST currently requires a root cause analysis on all significant network failures. The preponderance of media attention to this event caused its classification as “significant”.

**Contact Person:**

Ken Cartmell, Executive Director – Federal Regulatory  
U S WEST  
1020 19th Street, NW, Suite 700  
Washington, D.C. 20036  
Telephone (202) 429-3136

00-42

**FCC INITIAL REPORT**  
**U S WEST - Large Scale Abnormal Condition Report (LSACR)**  
**Service Disruption Report**

[X] 120 MINUTE REPORT [ ] 3 DAY REPORT

ACR #: MN 000321.004

Date Of Incident: 3-21-00 Time Of Incident: 14:01 CST

Geographic Area Directly Affected: MINNEAPOLIS, MINNESOTA MINNEAPOLIS  
[Cities, LATA(s), States(s)] AIRPORT

CLLI code(s) for affected area: EGANMLB

Estimated Number of Customers Affected: NORTHWEST AIRLINES  
[i.e. Access lines in the switch, LATA(s) or States(s)]

Types of Services Affected (e.g. Local, Toll, 800, 911, FAX, etc.): NORTHWEST AIRLINE

Duration of Outage (Hours & Minutes): ONGOING

Estimated Number of Blocked Calls: UNDER INVESTIGATION

Apparent Cause of Incident: CUT FIBER OPTIC CABLE

Method Used to Restore Service: SPLICE CABLE

Steps Taken to Prevent Recurrence: UNDER INVESTIGATION

CONTACT PERSON: Kenneth Cartmell-Exec. Dir-Fed Regulatory Ph: 202-429-3136  
U S WEST  
1020 19th Street NW Suite 700, Washington, D. C. 20036

Tim Mason  
Vice President - NROC  
Ph: (303) 707-5100  
U S WEST  
700 W. Mineral, Littleton, CO 80120

-or-  
Dave Rygh  
Director - Network Management Center  
Ph: 303-707-5608  
U S WEST  
700 W. Mineral, Littleton, CO 80120

Date Reported to FCC: 21:47 CST

Time Reported to FCC: 21:49 CST

Person Faxing Report: M. WEVDL

(Include AM/PM, Time Zone)  
Time Confirmed with FCC: \_\_\_\_\_

Telephone Number: 303-707-6877

FCC Contact Name: \_\_\_\_\_

**PRI FAX: Monitoring Watch Officer (202) 418-2812-Confirm at (202) 632-6975**

Secondary FAX: Monitoring Watch Officer (301) 725-2521 - Confirm at (301) 725-2278  
(To be used only at the direction of the Primary Fax Monitoring Watch Officer)

**Also FAX to:** U S WEST Federal Relations Office at (202) 296-5157

**Also FAX to:** Karen Eccli/Jane Quigley (303) 707-2229

**Also FAX to:** Glenda Waibel (206) 345-2129

**Also FAX to:** Bev Sharpe (303) 694-1719

**\* USWEST AWARE OF AIRLINE DELAYS AT 18:42 CST.**